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JUN 2 6 1998
DOE-0938-98

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Schneider:

COMMENT RESPONSES/REVISIONS TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY JUNE 12, 1998, COMMENTS ON THE DRAFT IMPLEMENTATION PLAN FOR ABOVE-GRADE DECONTAMINATION AND DISMANTLEMENT OF THE SEWAGE TREATMENT PLANT COMPLEX

Reference: **Letter from Schneider to Reising, "DOE-FEMP Disapprove: RTC STP Complex Implementation Plan," dated June 12, 1998.**

Please find enclosed Department of Energy (DOE) responses and proposed revisions to the draft Sewage Treatment Plant (STP) Complex Implementation Plan for Above-Grade Decontamination and Dismantlement (D&D) that were prepared to address Ohio Environmental Protection Agency (OEPA) comments to the May 26, 1998, comment response package submittal.

The OEPA comments, dated June 12, 1998, included three general comments that either requested further clarification or expressed disagreement on issues not resolved in the May 26, 1998, comment response package. The DOE provided OEPA with the proposed responses on June 23, 1998, (by fax) and received verbal approval in a follow-up conference call pending receipt of the actual revisions. As noted during the conference call, DOE agrees to each of the comments presented by the OEPA. Furthermore, the STP D&D project immediately began implementation of those actions by installing the supplemental air monitor and establishing a debris stockpile area with silt fencing to the east of the STP incinerator.

If you have any questions, please contact Art Murphy at (513) 648-3132.

Sincerely,

Johnny Reising

FEMP:Murphy

Johnny W. Reising
Fernald Environmental Remediation
Project Manager

Enclosure: As Stated

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DOE RESPONSES TO
OHIO EPA COMMENTS DATED JUNE 12, 1998
ON DOE RESPONSES/REVISIONS TO THE
DRAFT SEWAGE TREATMENT PLANT COMPLEX IMPLEMENTATION PLAN

DOE Responses to
Ohio EPA Comments Dated June 12, 1998 on DOE Responses/Revisions
to the Draft STP Complex Implementation Plan

OHIO EPA GENERAL COMMENTS

Ohio EPA Comment #1

[Re: Original Comment #1] Ohio EPA does not agree with DOE's position regarding the refractory waste from the STP Incinerator. The elevated contamination levels associated with these bricks show it is most likely process related wastes. Ohio EPA believes a decision to disposition this material offsite is most appropriate. The safety and cost issues associated with inspecting each brick for process residue out weigh the costs associated with dispositioning less than 2 yd^3 off-site. Visual inspection of the brick will be difficult to discern. Finally, the recent Tc-99 investigation of the STP reveals an as yet undefined source for the Tc-99 contamination. It is likely the incinerator contributed to this contamination and that the refractory may contain significant quantities of Tc-99. Therefore, if DOE insists on placing the material into the OSDF, Ohio EPA believes additional sampling of the refractory followed by a comparison to the evaluation of high Tc-99 areas made in the OU3 RI/FS is appropriate.

DOE Response:

- Clarification: The volume estimate for refractory material is 52 yd^3, not 2 yd^3.

- DOE's inquiry into the STP area soil sampling effort revealed that six samples were taken from the incinerator ash, which was removed during safe shutdown and currently awaits off-site disposal. The ash was analyzed for Tc-99 during OU5 soil investigations and the average result was reported to be approximately 2,340 pCi/gram. This data was reported by an outside laboratory to OU5 soil investigators on June 17, 1998 and the final report is pending.

- Based on the recent results of the ash sampling, and the probability that Tc-99 contamination found in the ash would also be present at elevated levels in the refractory lining (lagging insulation and fire brick) above what was estimated during the OU3 Remedial Investigation/Feasibility Study, DOE agrees to disposition this material at NTS.

DOE Action:

The Implementation Plan has been revised to reflect the off-site disposition of the estimated 52 yd^3 refractory lining debris to NTS. The appropriate revisions have been made in redline/strikeout form to Section 2.3.4 on p. 12 (Table 2-2), p. 14 (lines 13-21), p. 16 (lines 10-12), and p. A-2 in Appendix A (NTS Confirmatory) to reflect the NTS disposal decision.

Ohio EPA Comment #2

[Original Comment #4] DOE's response to this comment and subsequent revised text fail to provide sufficient detail regarding storm water controls for debris piles associated with the project. As requested in Ohio EPA's original comment the document must include the maximum duration for the pile to be in place, the plans must specify the location of the pile and all storm water controls to be implemented. Simply assuming the material has been encapsulated is insufficient.

DOE Response:

- DOE plans to position debris stockpiles on the respective slabs of the dismantled structures. Structural steel from the STP Incinerator loading dock will likely also require

stockpiling, which is currently planned for an adjacent asphalt surface located to the east of the incinerator.

- Silt fences will be placed along the downgradient sides of any debris staged in stockpiles awaiting containerization. Debris that has removable contamination, based on current and ongoing radiological surveys, will also have its surfaces encapsulated while in stockpiles to prevent contaminant release.

- Based on the projected container (Roll-Off Box) supply when debris is to be generated, stockpiling of debris for Components 25A, 25B, 25E, and 28F is expected to occur for up to three weeks. Regarding a *maximum* duration, however, DOE can only commit to the containerization of stockpiled debris by the completion of D&D activities as reflected in the schedule shown in Table 4-1 of the Implementation Plan.

- When containers are made available, stockpiling of debris is not expected to occur beyond the time needed to load it into containers.

DOE Action:
Section 2.3.4 of the Implementation Plan has been revised to include this detail. Please refer to the redline/strikeout text on pages 14 (lines 25, 29-32), 15 (lines 1-4, 6-8, 13-20), 17 (lines 8-15), and page 4 of Specification Section 01515, Article 3.1.G.1.

Ohio EPA Comment #3
[Original Comment 5] It is interesting to note that since Ohio EPA made the original comment recommending project specific air monitoring, DOE's dose estimates have gone up over 3 orders of magnitude. Yet, DOE still proposes no monitoring at the MEI. Considering this is likely to be the most contaminated remediation at the property fence line, DOE's decision is dismaying. Ohio EPA expected that DOE would want to collect data at the MEI to demonstrate to the public the effectiveness of control activities. Ohio EPA reiterates our recommendation that DOE conduct project specific air monitoring at the MEI.

DOE Response:
- Although the original decision not to conduct supplemental radiological air monitoring at the maximally exposed individual (MEI) was based on the correct dose estimate (i.e., 1.3 x 10^{-3} mrem/year), DOE has agreed to provide a continuous air monitor in a spot located in the southeast quadrant of the STP project area in line with the MEI. Placement of the project-specific air monitor *at* the MEI is not possible due to the consistent opposition by off-site residents in the past when FEMP air monitors were proposed to be placed on their properties. Considering the proximity of the proposed monitoring location to the D&D activities, it will provide adequate monitoring capabilities for potential migration of contaminants toward the MEI.

- The decision to provide this one supplemental monitor (designated as STP-1) for the STP D&D project is in recognition that since the STP is located immediately adjacent to the fenceline, existing FEMP monitors may not provide optimal coverage. Accordingly, the location of the supplemental monitor in the southeast quadrant of the STP project area was

chosen to enhance coverage between Integrated Environmental Monitoring Program (IEMP) monitors (AMS-3 and AMS-29 — please refer to Figure 2-1 in the Implementation Plan) while also addressing any concerns for the MEI.

- The monitor will be used to collect total suspended particulates using a high volume continuous sampler and airborne total uranium will be the primary radionuclide of concern. Data will be evaluated to ensure that the activities at the STP do not disproportionately contribute to the site's annual dose limit, thus limiting other site activities or impacting public health. Since the intent of this monitor is to supplement the IEMP, the data analysis should be consistent with the protocol described in the IEMP.

DOE Action:
Section 2.4 of the Implementation Plan has been revised to reflect the detail described above. Figure 2-1 was revised to include the location of air monitor STP-1 among the IEMP air monitors. Figure 1-1 also has been revised to illustrate the location of the supplemental monitor relative to the project area. Text changes were made in redline/strikeout form on pages 16 (line 28), 17 (lines 1-3), 19 (lines 2-12, and 24-26), 21 (lines 26-31), 22 (lines 1 and 4-6).

PROPOSED REVISIONS TO THE STP COMPLEX D&D IMPLEMENTATION PLAN
(TEXT SHOWN IN REDLINE/STRIKEOUT FORM)

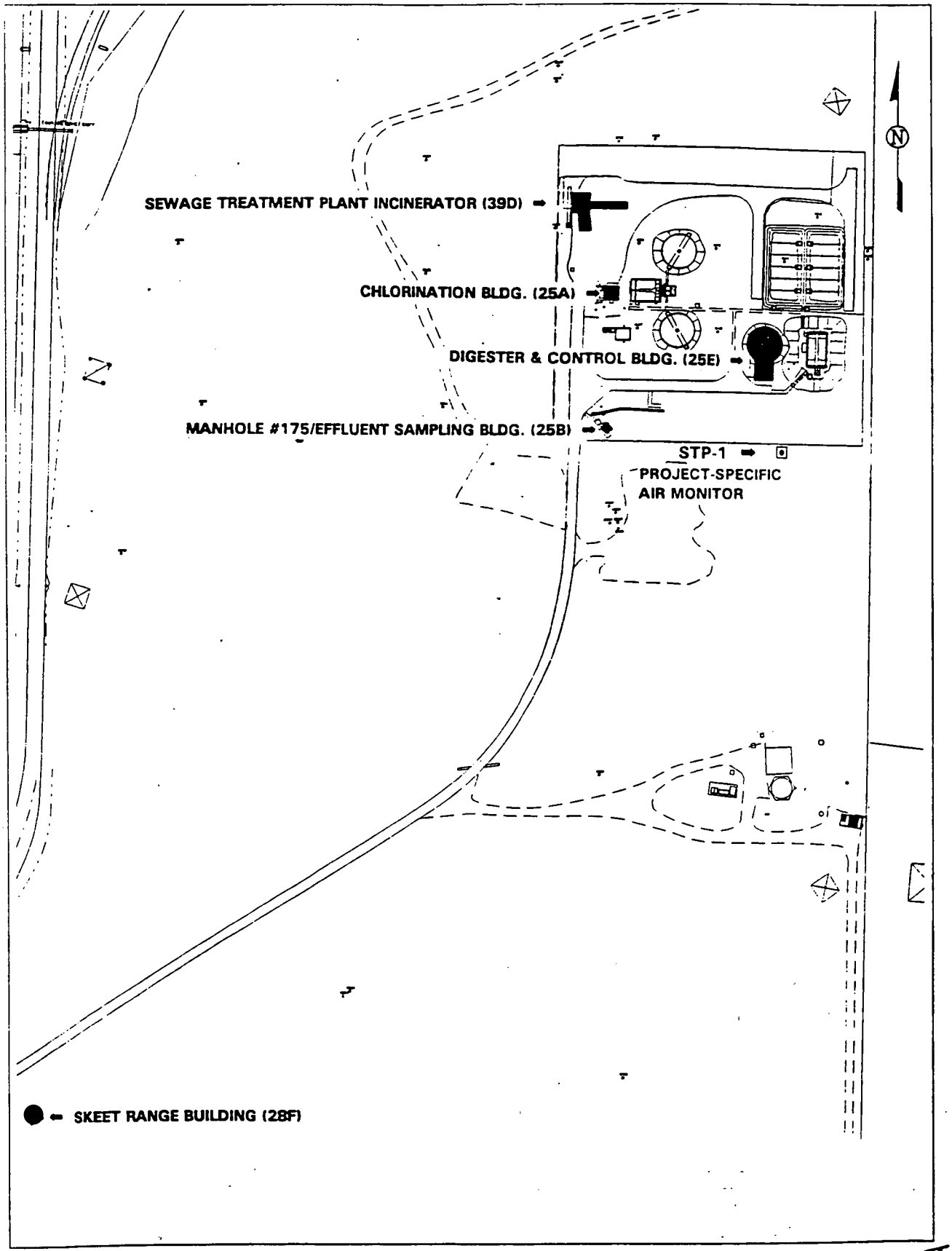

FIGURE 1-1 Sewage Treatment Plant Complex Project Area

8

TABLE 2-2 Bulked Material Estimates (ft^3)

Component Designation	Categ. A Accessible Metals	Categ. B Inaccessible Metals	Categ. C Process Related Metals	Categ. D Painted Light-Gauge Metals	Categ. E Concrete	Categ. F Brick	Categ. G Non-Regulated ACM	Categ. H Regulated ACM	Categ. I Misc. Materials [1]	Component/ Complex Totals
25A	0	62	0	0	709	0	0	0	108	879
25B	0	133	0	0	0	0	0	0	123	256
25E	600	3,407	0	2	8,822	0	0	0	186	13,017
28F	0	146	0	0	47	0	0	0	1	194
39D	0	314	0	0	1	0	41	0	5,658	6,014
Miscellaneous[2]	0	952	0	0	0	0	0	0	672	1,624
Complex Total	600	5,014	0	2	9,579	0	41	0	6,748	21,984
Container[3]/ Quantity	ROB[4] /1	ROB/7	n/a	ROB/1	ROB/24	n/a	Pallets/4	n/a	ROB/15 WMB/30[5]	
Interim *Storage* Config	OSDF *Transfer*	OSDF *Transfer*	n/a	OSDF Transfer	OSDF Transfer	n/a	OSDF Transfer	n/a	OSDF Transfer / Plant 1 Pad[6]	
Disposition	OSDF[7]	OSDF	None[8]	OSDF	OSDF	n/a	OSDF	n/a	OSDF / NTS[9]	

Footnotes:

(1) Excludes compactibles which will be placed in dumpster for compaction. Miscellaneous materials can be containerized with non-regulated asbestos containing material (ACM).

(2) Includes Miscellaneous Structures and Fixtures:
   a. Accessible pumps and piping, post indicator valves, and electrical panels in STP area;
   b. Three-sided fiberglass shelter at Primary Settling Basin (25G);
   c. Wiper blade apparatus for Primary Settling Basin (25G);
   d. Sprinkler arms for Trickling Filters (25H);
   e. All wooden utility poles inside the STP area and those extending west towards RIMIA; and
   f. T-107 (Rad. Control Access Trailer in southwest corner of STP area) is included but may be reused by Area 1 Phase II excavation support.

(3) Individual Roll-Off Boxes may contain commingled debris based on the following segregation groupings, which are consistent with On-Site Disposal Facility Impacted Material Categories: a) OU3 Debris Categories A, B, D, and E (OSDF Impacted Material Category 2); and b) OU3 Debris Category I -- except Component 39D refractory lining, which will be containerized in Small White Metal Boxes for NTS disposal. ~~(predominantly OSDF Impacted Material Category 4); and c) OU3 Debris Category I — Component 39D refractory lining (OSDF Impacted Material Category 2 - however, special placement precautions such as continuous wetting will be used to minimize potential emissions during placement)~~.

(4) ROB: Roll-Off Box holds 810 cubic feet and/or 16.95 tons of material

(5) WMB: Small White Metal Box holds 40 cubic feet and/or 7,000 pounds of material; to be used for the refractory material from Component 39D.

(6) Refractory material from Component 39D only.

(~~7~~5) OSDF: On-site Disposal Facility;

(~~8~~6) In the event Process Related Metals are encountered, they will be dispositioned at NTS and described in the project completion report.

Materials will be containerizec inside the STP controlled area on pavement located adjacent to structures being dismantled. Filled containers will be covered/sealed, screened for exterior radiological contamination, inspected, tagged, and transported directly to the OSDF transfer area.

Materials that do not meet facility release criteria (discussed in Section 2.5.2), which is anticipated for some materials generated from the STP Incinerator, will be containerized inside a load-out vestibule that will be part of an enclosure to be erected around that structure. Should any materials be encountered that do not meet the OSDF waste acceptance criteria (e.g., materials with "visible process residues" such as yellow cake, green salt, etc.), they will be containerized separately from OSDF-bound materials, follow the same load-out and transportation procedures, and be transported to the Plant 1 Storage Pad for packaging and disposal at the Nevada Test Site. Based on records of historical operations of the STP Complex, all equipment/systems in the components are non-process; however, due to probable elevated levels of technetium-99 (Tc-99) in the refractory material, based on preliminary results recently obtained from incinerator ash samples, the entire quantity of refractory material will be containerized for shipment to NTS. ~~Although safe shutdown of the STP Incinerator previously removed residuals/ash from the incinerator in 1997, there is potential for visible process residues to be present on refractory material surfaces as a result of process area trash incineration during its operation. The safe shutdown project manager, however, noted that there were no visible process residues observed during safe shutdown. Regardless, the refractory lining of the STP Incinerator will be inspected for visible process residues.~~ Other equipment/systems in the STP Complex are definitely non-process and therefore will not be subject to inspection for visible process residues per Article 3.1.B.1 of the Work Scope Condition/Specification — Removing/Fixing Radiological Contamination.

Stockpiling of debris for long term interim storage is not currently planned due to the expected availability for placement in the OSDF and the need to remove above-grade debris for access by the Area 1 - Phase II excavation subcontractor. Due to the potential for limited ROB containers during the first few weeks of the project, there may be a need to temporarily stockpile Categories A, B, and E debris from Components 25A, 25B, 25E, 28F on their respective slabs, and the debris from the loading dock of 39D on adjacent asphalt, for up to approximately three weeks until ROBs become available. When containers are made available, stockpiled debris will be promptly loaded for transportation to the OSDF staging area. When

a sufficient number of containers are available, stockpiling/staging of debris is not expected to occur beyond the time needed to load it into containers. ~~B and E debris from Building 28F on its slab and Categories A, B, and E debris from the loading dock of Component 39D on adjacent asphalt.~~

Stockpiling of debris, if utilized, will follow the strategies provided under Section 3.3.2.3 of the OU3 Integrated RD/RA Work Plan, which requires best available storage configuration, ~~and~~ reduction and potential fixation (encapsulation) of contaminants, and control of potential contaminant release. Work Scope Condition/Specification — Removing/Fixing Radiological Contamination requires that contaminants be removed to the radiological facility release criteria discussed in Section 2.5.2 or else encapsulate as stated. Should the best available storage configuration,(i.e., containers with lids or tarps) be temporarily unavailable, stockpiling of debris that meet facility release criteria (as done on previous D&D projects at the FEMP) would be performed. Facility release criteria for debris refers to the removal or fixation of gross surface contamination in an effort to eliminate or minimize the release of removable contaminants from debris when exposed to the environment. Debris that has removable contamination, based on current and ongoing radiological surveys, will be encapsulated while in stockpiles to prevent contaminant runoff. Silt fences will be placed along the downgradient sides of debris stockpiles to prevent migration of contaminants. The Work Scope Condition/Specification (Section 01515) requires in Article 3.1.G.1 silt fences be staked along the downgradient boundaries of debris stockpiles in the STP project area.

Material tracking and reporting will be accomplished by including a project-specific Site-Wide Waste Information, Forecasting and Tracking System/Integrated Information Management System (SWIFTS/IIMS) summary in the Project Completion Report. Section 3.3.2.2 (Segregation, Containerization, Tracking) of the OU3 Integrated RD/RA Work Plan describes material tracking and reporting using SWIFTS. OU3 Debris Categories A, B, D, and E debris are classified as OSDF Category 2 material. Therefore, commingled Debris Categories A, B, D, and E quantities will be tracked in SWIFTS/IIMS under a discreet Material Evaluation Form that corresponds to Impacted Material Category 2 debris in interim storage. Debris Category I (Miscellaneous Materials) is also Impacted Material Category 2 but will not be commingled and therefore actual volumes will be easily obtained. Debris Category G (Transite) is regarded as Impacted Material Category 3 and will also be handled separately. Since the volume of commingled debris will represent a combination of waste streams, proportions of OU3 debris

11

categories within that total volume will be derived based on original estimates to identify and track waste volumes by OU3 debris category. These derived quantities will be documented in the Project Completion Report for the STP Complex. Other than the evolution of tracking more specifically for the purpose of OSDF placement, project-specific material tracking and reporting strategies for the STP Complex project do not differ from the strategies laid out in the OU3 Integrated RD/RA Work Plan and therefore no additional details were developed during the remedial design process.

The disposition strategy for STP Complex materials is consistent with the requirements stated in the OU3 Final Action ROD (1996b) and strategies presented in the OU3 Integrated RD/RA Work Plan; however, in an effort to continue to minimize the amount of Tc-99 that will be placed in the OSDF, DOE has administratively decided to dispose the refractory material from Component 39D at NTS. Aside from the refractory material, Table 2-2 identifies that all other debris generated from this project will be placed in the OSDF. No treatment will be necessary for disposal since all chemical-based waste acceptance criteria are met based on OU3 RI/FS data.

2.3.5 Material Recycling/Reuse

Accessible metals (Category A) from the complex have been evaluated for potential recycling options and a detailed summary of that evaluation is available in Appendix B. Using the Decision Methodology for Fernald Material Disposition Alternatives (the "Decision Methodology"), 6.5 tons of potentially recyclable accessible metals (OU3 Debris Category A) from all STP Complex components were evaluated by comparing the four leading alternatives to on-site disposal. Of the three phases of the Decision Methodology (Threshold Phase, Life Cycle Analysis Phase, and Decision Phase), only the first phase was applied since the comparative evaluation of project costs for each alternative showed that the total costs for each of the recycling options greatly exceed the 25 percent total cost criteria compared to OSDF.

2.4 Environmental Monitoring

Project-specific environmental monitoring includes air monitoring and ~~only~~ wastewater monitoring. Supplemental environmental radiological air monitoring will ~~not~~ be performed

despite ~~due to~~ negligible potential for contaminant releases from the project.~~; however, the FEMP site-wide air monitoring data from upwind and downwind air monitors will be received to ensure that the site continues to meet applicable standards.~~ Groundwater monitoring is not applicable to this project but may be employed if necessary as described in Section 3.6.2.3 of the OU3 Integrated RD/RA Work Plan.

Project-specific stormwater management is governed by the FEMP Stormwater Pollution Prevention Plan (DOE 1996c) and any monitoring associated with that program is managed by the Aquifer Restoration Project; however, project-specific stormwater runoff controls will be implemented in accordance with the Work Scope Conditions/Specifications for Mobilization, Demobilization, and General Site Requirements (Specification Section 01515). The specification requires that silt fences be placed along downgradient boundaries of debris stockpiles to ensure that any potential contaminants from stormwater runoff are contained within the storage area. ~~Since the STP incinerator will be dismantled, reduced in size, and containerized within an enclosure, stormwater control measures will not be necessary during above-grade D&D.~~

Surface Water (Wastewater) Monitoring

As noted, it is anticipated that only a small volume of equipment decontamination washwater will be generated. Section 2.3.2 of this implementation plan describes the wastewater management strategies. The OU3 Integrated RD/RA Work Plan describes the overall strategies to be implemented for project monitoring of wastewater. Listed below are the specific references in the work plan:

- **Section 3.2.5 Surface Decontamination:** Wastewater collection and management strategies.
- **Section 3.3.3 Management of Secondary Waste:** The overall strategy for managing wastewater, as one of the primary aspects of secondary waste, through the site wastewater treatment system.
- **Section 3.5.2 Management of Contaminated Water:** References site procedure to be used for the evaluation and management of contaminated wastewater.
- **SAP/Section 2 General Sampling and Data Collection Approach:** Focuses on wastewater sampling, among other aspects of sampling.
- **SAP/Section 3 Specific Sampling Programs:** Sampling for disposition of wastes,

Environmental radiological air monitoring during the D&D of the STP Complex project will consist ~~only~~ of data collection by one project-specific environmental monitor (designated as STP-1) and the network of air monitors operated under the protocol established by the Fernald Site Environmental Monitoring Program described in the site-wide Integrated Environmental Monitoring Plan (IEMP) (DOE 1997b), and discussed in Sections 3.5.1 and 3.6.2.1 of the OU3 Integrated RD/RA Work Plan. One supplemental air monitor will be placed approximately 90 feet south of Bldg 25E and approximately 130 feet to the west of the FEMP property line. The location provides a clear line of sight view of the incinerator and is out of the wake of Building 25E and the hill formed by the Primary Settling Basins (25G) and it is between the incinerator and the location of the Maximally Exposed Individual (MEI). Air monitoring data from the project-specific monitor, in addition to the FEMP site-wide network of air monitors operating under the IEMP, will be analyzed for trends consistent with the protocol described in the IEMP.

FEMP Air Monitoring Station #3 is located approximately 500 feet to the northeast of the STP Incinerator (i.e., immediately downwind based on historical wind rose data) and will ideally serve the environmental radiological air emissions monitoring function during D&D. AMS #3, AMS #29 (another relatively local IEMP monitor located approximately 1,400 feet south-southeast), as well as the other FEMP boundary monitors, are shown in Figure 2-1. As discussed later in this section, the need for a supplemental environmental radiological air monitoring program for this D&D project was evaluated by modeling the potential release of radiological (uranium) contaminants from the components during D&D. Due to the low concentrations of contaminants in the components, with the exception of the STP Incinerator which will have extensive engineering controls (encapsulation of the interior surfaces and enclosure with high efficiency particulate air-filtered ventilation), supplemental radiological monitoring ~~is not warranted~~ was initially determined through emissions modeling to not be necessary; however, in an effort to enhance the IEMP network coverage of the project a supplemental air monitor will be added for the duration of the STP D&D project.

Radiological surveys data summarized in Table 2-1 were used for the air emissions modeling input. Further explanation of the modeling effort is provided below. Computer modeling of potential uranium emissions from the STP Complex components used the CAP88PC method to measure potential dose impacts from the project. CAP88PC is the personal computer version of the U.S. EPA model CAP88 that is the approved method for predicting dose impacts

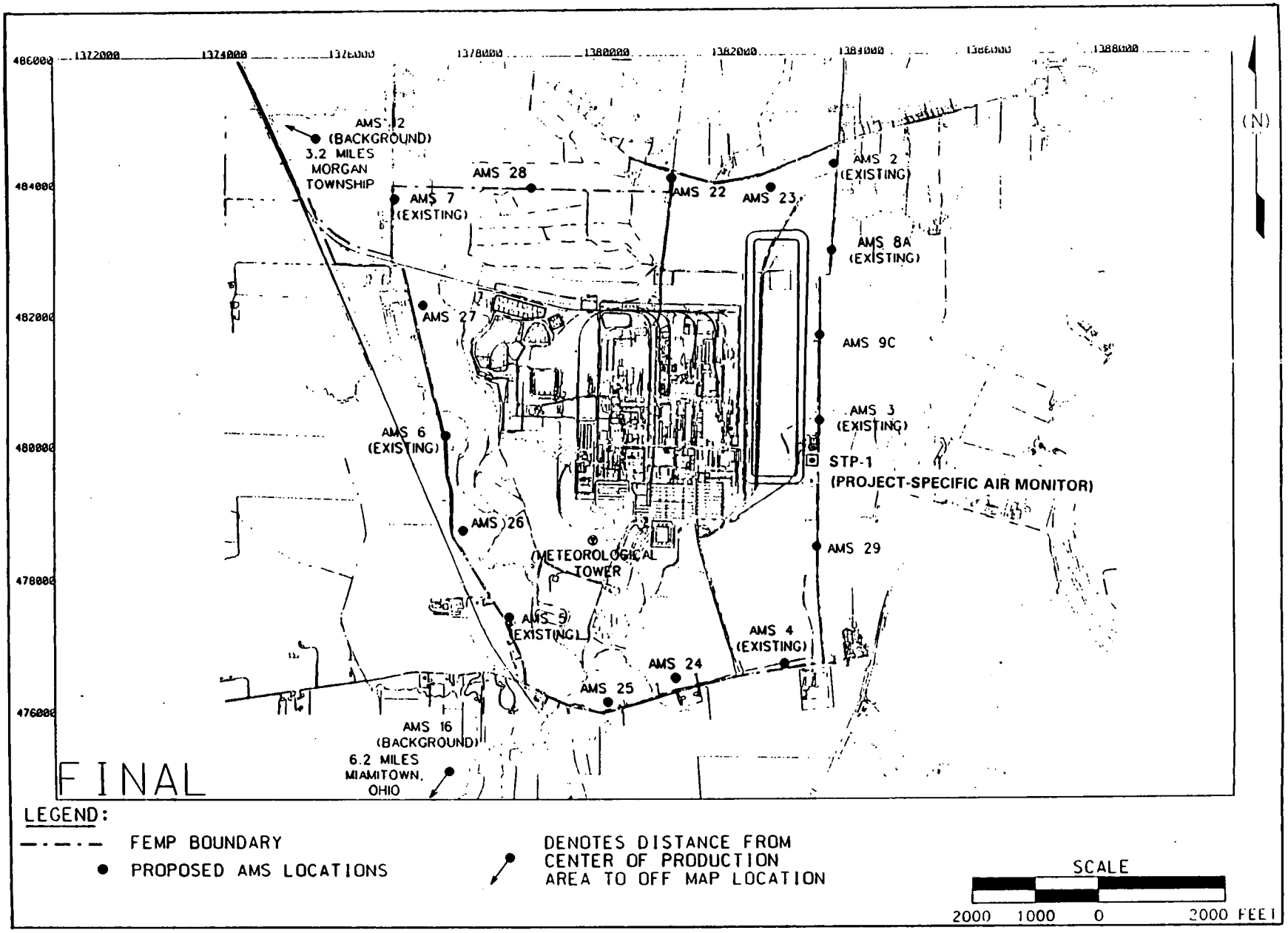

FIGURE 2-1 FEMP Site and STP Complex Air Monitoring Locations

to off-site personnel from emissions of radionuclides under the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) regulations. It should be emphasized that the CAP88PC model is being used as a tool to assess potential dose to off-site personnel from radionuclide emissions from a project for the purpose of identifying potential mitigative controls and possibly the use of supplemental monitoring measures; it is not being used as a means to demonstrate compliance with NESHAPs Subpart H. The method to be used for demonstrating NESHAPs Subpart H compliance is presented in the IEMP as a collective sitewide strategy.

The CAP88PC modeling methodology is prescribed by the U.S. EPA reference manual: U.S. EPA User's Guide for CAP88, Version 1.0, 402-B-92-001. Computer modeling of potential radiological emissions from the STP Complex used radiological smear data to provide a more realistic measure of removable alpha, beta, and gamma contamination rather than fixed contamination (identified through intrusive sampling results from the OU3 RI/FS database) for estimating contaminant release. The removable contamination data obtained through smear sampling represents a model input that depicts worst case emissions since it represents removable contamination present prior to the decontamination activities that will precede dismantlement. Fixed contamination should remain fixed in place and not become airborne during D&D activities. Therefore, fixed contamination was not included in the model as potential emissions from the project.

The modeling methodology assumed no controls on emissions release, such as HEPA filters on containment ventilation systems and a percentage (of removable contamination) that would become airborne during D&D activities. Potential emissions sources were treated as being in readily dispersible forms. The results of the computer modeling indicated that the MEI would theoretically be located approximately 714 meters east-southeast of the project area and would potentially receive a maximum Effective Dose Equivalent of 1.3×10^{-3} mrem/year from the D&D activities. ~~Based on a review of the results of the computer modeling, no supplemental environmental air monitoring will be required for the STP Complex D&D activities. Considerations also used in making this decision were the plan to implement D&D over a relatively short duration for the one significant source of radiological contaminants (STP Incinerator) in addition to the fact that the STP Incinerator will be fully enclosed in a contained environment with HEPA ventilation during D&D and waste management load out.~~

~~Further justification for not providing project specific air monitors comes from a~~Analysis of data from the Plant 7 Dismantling - Removal Action No. 19 Final Report (DOE 1995), the Project Completion Report for Building 4A (DOE 1997c), and the Plant 1 Complex - Phase I Project Completion Report (DOE 1997d), ~~which~~ have shown that dismantlement activities resulted in negligible airborne radiological contaminant emissions, most likely due to the work practices and engineering controls that are consistently applied to D&D projects at the FEMP. Results for airborne uranium contamination during those projects have been approximately 5 percent of the DOE maximum off-site guidelines of 0.1 pCi/m^3. The relationship between pCi/m^3 and mrem/year may be understood by the conversion factor used to equate the two terms at the FEMP: if inhaled continuously (24 hours/day, 365 days/year), 0.1 pCi/m^3 of uranium in air will result in a dose of 100 mrem/year. It should be noted that various assumptions have been incorporated into this conversion factor. Mitigative measures that might be employed in the event of exceedence of the set criterion would include an increase in engineering and administrative controls during a particular task that has been identified as the cause or possible cause of the elevated radiological levels. Such controls could include negative pressure within an enclosed work area using additional HEPA filtration units or additional surface cleaning (wash) steps before removing material from the containment area.

2.5 Remedial Tasks

A general approach to the above-grade D&D of the STP Complex is described in the following subsections. Section 3 elaborates on this discussion by identifying component-specific interests concerning the six remedial tasks, as applicable. The remediation tasks that apply to the STP Complex are as follows:

- Preparatory Action: Safe Shutdown;
- Surface Decontamination; and
- Above-Grade Dismantlement.

Although the OU3 Integrated RD/RA Work Plan identifies three additional remedial tasks that may apply to D&D projects (i.e., preparatory action - inventory removal, asbestos removal, and hazardous waste management unit decontamination and removal), only the three identified in the bullets above apply to the STP Complex components.

Prior to actual field D&D activities, it is planned that STP D&D Complex Project Management will establish support facilities, including a trailer that has an office and break room. It is

A project-specific sampling plan for the decontamination washwater will be developed prior to commencement of sampling. An example of a typical wastewater sampling plan is attached to Appendix D of the OU3 Integrated RD/RA Work Plan.

Nevada Test Site (NTS) Confirmatory

Confirmatory ~~No~~ sampling is anticipated for qualifying refractory material from the STP Incinerator ~~materials~~ for NTS disposal. ~~since all~~ All other STP Complex debris is expected to be dispositioned in the OSDF. ~~Should there be a need to~~ To prepare any debris for NTS shipment ~~(e.g., debris from the STP Incinerator that would have visible process residues)~~, one percent of each material/waste stream going to NTS would be sampled. For each container that makes up the one percent, three samples will be taken and analyzed in accordance with the NTS Waste Acceptance Criteria (WAC).

Permitted Off-site Commercial Disposal Facility

It is not anticipated that mixed waste will be generated; however, sludge collected from the settling of decontamination washwater and associated filtercake will be sampled along with the washwater to determine disposition. Mixed waste may result from the collection of lead-based paint in the filtrate. No lead flashing is present in the STP Complex components. Sampling and analysis required for shipment certification will be as specified by the permitted facility's WAC. Section 3.2.3 of the SAP contained in Appendix D of the OU3 Integrated RD/RA Work Plan addresses analytical requirements for off-site disposal.

Asbestos Air Monitoring

Asbestos air sampling will not be necessary since friable ACM is not present in project STP Complex components. Occupational air sampling for asbestos will not be required during Component 39D transite removal due to the completion of a negative exposure assessment as required by OSHA, unless the Site Support Contractor chooses to use workers with minimal work experience to remove the transite.

Radiological Air Monitoring

Data from the IEMP site-wide routine environmental air monitoring program will be used to complement the STP Complex D&D occupational air monitoring program. Per the FDF Radiological Control Requirements Manual, occupational air (i.e., breathing zone) samplers will be worn by approximately least twenty-five percent (25%) of the workers in each work

SECTION 01515

MOBILIZATION, DEMOBILIZATION AND
GENERAL SITE REQUIREMENTS

- Contamination Area/Controlled Area
- High Contamination Area
- Adjacent Contamination Areas controlled to different isotopes

b. When the requirements for orange construction boundary fence and yellow radiological fence overlap, the yellow radiological fence may serve as the sole boundary.

c. When yellow fence requirements coincide with an existing barrier such as chain link fence or a building wall, the existing physical barrier may serve as the boundary.

5. Fencing for short-term work may be supported with portable stanchions. Fencing for long-term activities must be supported by posts driven into the ground. Posts of stanchions shall be no more than six feet apart. Entry points shall be established such that they may be easily opened and can be held closed. These points shall be large enough to support traffic and/or movement of waste containers. For situations where personnel access is the only need, building doors or overlapping yellow fence that can be tied back and supported by the remaining fence while open (i.e., will not lie on the ground) may be utilized.

E. Gravel Pads for Access and Queuing Areas

1. Grading of site shall prevent ponding of water. Use a minimum slope of 1 percent. All grading will direct water toward the site's storm drainage system.

F. Protecting Adjacent Facilities and Components

1. The Site Support Contractor is responsible for avoiding damage to adjacent structures, material and equipment including underground utilities during decontamination and dismantlement activities.

G. Stormwater Control

1. Stormwater control will be required for activities that could disturb soils or otherwise allow for release of contaminants from stockpiled debris. ~~Since debris must have loose surface contamination removed or encapsulated, per Work Scope Condition/Specification Removing/Fixing Radiological Contamination, it is not anticipated that storm water controls will be necessary for stockpiled debris. If FDF Project Management determines that storm water control devices are necessary,~~ To contain stormwater runoff that contacts stockpiled debris, silt fences shall be placed along the downgradient sides of debris stockpiles. sStorm drainage systems within the construction zone shall be maintained free and clear of debris and sediments by use of control devices, such as staked silt fences, and be maintained throughout the project.

19